

REMARKS

In the last Office Action, the claims were rejected on the new grounds of obviousness (35 U.S.C. 103) from the disclosures of the Van Sprang, Schmidt and Ohnishi. The invention, as defined by the claims, is an LC display with improved contrast achieved by reducing ellipticity of reflected light and by matching the polarization axes of incident and reflected light when the cell is in the black or off state. Matching the polarization axes of incoming and outgoing light allows less light to pass through a final analyzer with the cell in an off state to create a darker off state, and allows more light to pass through with the cell in an on state for improved contrast ratio. Although Van Sprang discloses the use of a retarder and quarter wave plate, it is for reduction of residual transmission and not for the purpose of improving contrast ratio. See Van Sprang, col. 3, lines 49-58. As noted by the Examiner, Van Sprang does not disclose the use of phase retarders to alter the ellipticity of reflected light, or to match the polarization axes of incident and reflected light when the cell is in the off state in order to improve contrast ratio. Although Schmidt addresses the incident angle and polarization of light in a liquid crystal light valve, there is no suggestion to match polarization axes of incident and reflected light with the cell in an off state to improve contrast. The Schmidt invention addresses only the P-polarization of light reflected by a polarizer. See Schmidt, col. 2, lines 38-65, and col. 4, lines 30-56 no discussion of polarization axes of incident and reflected light with the cell in an off state.

Because the two primary references do not disclose or suggest the claimed light valve or liquid crystal display system which functions in the manner defined by the claims, the claims are not obvious from these references. Indication of allowance of the pending claims is therefore respectfully requested.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all claims are patentably distinct over the art of record and in condition for allowance thereof. If the Examiner believes there are any further matters that need to be discussed, the Examiner is invited to contact the undersigned.

If there are any other fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0959, referencing our Docket No. 109784.0002.

Respectfully submitted,
ROETZEL & ANDRESS

FEB. 23, 2004

Date



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I hereby certify that this correspondence (along with any other paper referred to as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the: Mail Stop ~~350~~ ^{US} Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



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(Typed or Printed Name of Person Mailing Paper)

Date: 2.23.04